

Notice of Allowability

Application No.

10/804,144

Examiner

Susan W. Berman

Applicant(s)

TAKIZAWA ET AL.

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 12/30/2005.
2. ☒ The allowed claim(s) is/are 1 and 5-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Election/Restrictions

Applicant's election without traverse of the species of Sample 202 in Example 3, claims 1 and 5-18, in the reply filed on 12/30/2005 is acknowledged.

The election requirement is hereby withdrawn because the claims have been found to recite allowable subject matter.

Response to Amendment

The objection to claims 7, 8 and 9 because of informalities is overcome by the amendments to the claims.

The rejection of claims 6 and 18 under 35 U.S.C. 112, second paragraph, is overcome by the amendments to the claims.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Claims 1 and 10 have been amended to recite the dye compounds of the formulas originally set forth in claim 3 and including formula (1) from original claim 2. The prior art cited herein does not teach the two-photon absorbing cyanine, merocyanine or oxonol dye compounds of the formulas set forth in claims 1 and 10. The closest prior art known to the examiner is discussed herein below.

DeVoe (6,852,766) discloses compositions comprising a reactive species and a multi-component, multiphoton photoinitiator system comprising a one-photon photoinitiator and a multiphoton photosensitizer, such as methine compounds.

Inagaki et al (US 2003/0052311 A1, filed 07-05-2002) also disclose compositions comprising a two-photon absorbing compound, such as the methine compounds on pages 4-6, monomers and photoinitiators.

Nirmal et al (7,005,229) disclose a multiphoton photosensitization method wherein the two-photon absorbing component is a semiconductor nanoparticle.

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Harada et al (US 2001/003032) disclose photopolymerization by way of multiple photon absorption and refers to the π conjugated compounds described by the Cumpston et al article of record as multiphoton initiators in paragraph [0076]. Methine, merocyanine and oxo alcohol dyes are disclosed as a filter film in paragraphs [0078 to 0084].

Swainson et al (4,471,470) disclose two-photon absorption mechanisms and teach two-photon absorbing dyes such as trimethine cyanine dye in column 19, lines 42-68.

Kalenda (3,615,545) discloses compositions comprising methine oxonol dyes, however, the composition do not contain polymerizable compounds and two photon absorption is not discussed.

Laridon et al (4,282,309) disclose photopolymerizable compositions comprising merocyanine dye photosensitizers, but do not disclose any of the instantly claimed dye compounds or two photon absorption by the photosensitizers.

Borror et al (3,976,493) disclose photosensitive compositions comprising dye compounds similar to those set forth in the instant claims but differing by the alkylene-amide linking moiety. Two-photon absorbing photopolymerization employing the sensitizing dyes is not discussed.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB

3/15/06



Susan W Berman

Primary Examiner

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